PHARMACY TECHNICIAN EXAM PREPARATION

Anatomy & Physiology

(ALL KEY POINTS)

1. Anatomy is the science of the structure of the body.
2. Anatomy deals with the study of the structure of different organs and body parts of a human.
3. The word is derived indirectly from the Greek anatomy, ana, meaning"up".tome, meaning"a cutting"
4. Regional Anatomy is the branch of anatomy that deals with the study of any specific part of the body
5. Systemic Anatomy is the branch of anatomy that deals with the study of any system of the body are called systemic
anatomy.
6. Cross-section Anatomy is the branch of anatomy that deals with the study of the cross-sectional part of the human body.
7. Gross Anatomy is a branch of anatomy, which deals with the study of the structure of human body parts by the naked eye
means that without any microscope or lenses.
8. Histology is the branch of anatomy, which deals with the study of microscopic parts/cells.
9. In the 19thcentury, the light microscope was invented
10. Embryology is the branch of anatomy, which deals with the study of embryo
11. Cytology Is the branch of anatomy that deals with the study of the structure of the cell and its components.
12. That part of the body which is present in front or near to abdomen is .called Ventral/Anterior
13.Ventral&Dorsal terms are used for body cavities
14. The part of the body which present near to the backside is called dorsal or posterior.
15. The part of the body which is present towards the upper side is called superior.
16. The part of the body which is present towards the lower side is called inferior.
17. The part of the body that is present near to the medial line is called medial.

18. Lateral is the part of the body that is present away from the medial line.
19. The line, which divides the body into two equal mean right and left parts are called the medial line.
20. Any part which is away from the surface is called deep.
21. Any part, which is present nearer to the reference point, is called superficial
22. The part which is present nearer to the medial line and towards the lower side is called proximal
23.Bending movement in which the angle between two bones decreases is called flexion
24.Extending movement in which distance between two bones increases is called Extension
25. In microscopic anatomy or histology we, study the structures with the help of microscopes.
26. Histology deals with the study of microscopic details of tissues that make the human body.
27. Cytology is the branch of anatomy that deals with the study of the structure of the cell and its components.
28. Embryology is the branch of anatomy which deals with the study of embryo
29. Radiology is the study of the' structure of the human body that includes the use of several imaging techniques
30. Anterior and posterior describe structures at the front(anterior)and back(posterior)of the body.
31. Superior and Inferior Describe a position above(superior)or below(inferior)another part of the body.
32. Proximal and distal describe a position that is closer(proximal)or greater distance(distal)from the trunk of the
body.
33. Superficial and deep describe structures that are closer to(superficial)or further/ greater distance from(deep)
the surface of the body
34. Medial and lateral describe a position that is closer to(medial) or further/ greater distance from(lateral)the
midline of the body.
35. The line which divides the body into two equal mean right and left parts are called the medial line.

36. Inferomedial is the part of the body that present near to the medial line and towards the lower side.
37. Two parts of the body that present on the same side of the body is called ipsilateral
38. Two body organs that are present opposite to each other is called contralateral.
39. Flexion and extension refer to a movement that decreases(flexion)or increases(extension)the angle between
body parts.
40. Abduction and adduction refer to a movement of a limb away(abduction)or towards(adduction)the medial line of
the body.
41. Elevation and depression refer to the movement of bones toward the upper side(elevation)or toward the lower side
(depression).
42. Dorsiflexion and Plantarflexion refers to a decrease in the distance(Dorsiflexion)or increases in distance
(Plantarflexion)between foot and leg.

43. Eversion and inversion refer to movements that tilt(move into a sloping position)the sole of the foot away
(eversion)or towards(inversion)the medial line of the body.
44.Upper limp consist of Forearm, Arm, and hand
45. Fore Arm starts from the scapula and ended to elbow joint
46. Fore Arm consists of a single long bone which is called the humerus
47.The humerus is the long bone in the upper limb
48.The arm consists of Radius and ulna
49.The lower limb consists of the thigh bone, leg, knee, and foot.
50.Leg technically starts from knee to ankle.
51.Leg consists of two bones which are called the tibia.
52.Tibia is attached to the toe nearest to the medial line.
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53.Fibula is away from the medial line
54.Tibia is a large bone and bear whole of the weight
55.Fibula is small it is attached to muscles.
56. Patella is also called a knee cap.
57. Patella connects femur and tibia

58.Foot consist of Tarsal, Metatarsal, Phalanges
59. The vertebral column consists of 33 irregular bones. These bones are classified into 5 different regions.
60.C1_C7(Cervical Region)
61.T1_T12(Thoracic Region).
62.L1_L5(Lumbar Region)
63.S1_S5(Sacrum Region)
64.Coccyx 3 Bone (Coccyx Region)
65. First seven vertebrae are called cervical vertebrae it helps for flexibility in work
66.Next twelve vertebras are considered as a thoracic vertebra.
67.Pelvic girdle is also called as hipbone. It is consists of two coxal(hip) bones.
68.This coxal bone is also called ossabone.
69.In child hood coxal bone is divided into three parts, ileum, Ischium, Pubic bone
70.The digestive system composed of a long muscular tube called gastrointestinal tract(GIT) or alimentary canal
71.Liver,Gall bladder and pancreas are supporting organs or GIT
72.The upper respiratory tract is consisting of the nose, pharynx(throat)and associated structures.
73.The lower respiratory tract is consisting of the larynx, trachea, bronchi, and lungs.
74.Nephron is basic structural&functional unit of the kidney
75.Cells are the smallest functional units of the body:
76.Cells grouped together to form tissues.
77.Different tissues are grouped together to form organs,
78.Organs are grouped together to form systems
79.A cell consists of a plasma membrane
80.Watery fluid of cytoplasm is called cytosol
81.Organelles are small structures with highly specialized functions
82.Plasma Membrane or Cell Membrane is an outer covering of the cell.
83.Plasma membrane is 7.5 to 10 nanometers thick.
84.Plasma membrane is composed almost entirely of proteins and lipids.
85.Cytoplasm is a jelly-like substance that surrounds the nucleus of a cell.
86.Ectoplasm---near to the cell membrane
87.Endoplasm---near to the nucleus
88.Cells are the smallest units of life.
89.Cells group together with one another based on a similar structure and function to

form tissues.
90.Tissues provide the numerous functions of organs necessary to maintain biological life
91.The study of tissues is called histology
92.The human body is composed of four basic types of tissues; epithelium, connective, muscular, and nervous
tissues.
93.These tissues vary in their composition and their function. A basic understanding of the role of each tissue
makes understanding the specific functions easier.
94. Epithelium forms the coverings of surfaces of the body.
95.Epithelium serves many purposes,including
protection,absorption,excretion,secretion,filtration,and sensory
reception.
96.Classification of epithelium is based on the shape of the cells and the arrangement of the cells
97.Simple Cells are found in a single layer attached to the basement membrane
98.Stratified cells are found in 2 or more layers stacked
99.Pseudostratified is a single layer of cells that appears to be multiple layers due to variance in height and location
of the nuclei in the cells.
100.Transitional cells are rounded and can slide across one another to allow stretching.
101.Cuboidal cells have a basic cube shape
102.Columnar cells are tall, rectangular or column-shaped cells

103.Simple epithelium consists of a single layer of cells
104.Simple epithelium consists of where absorption, secretion, and filtration occur.
105.Simple epithelial tissues are generally classified by the shape of their cells.
106.The four major classes of simple epithelium are simple squamous, simple cuboidal, simple columnar and
pseudostratified.
107. Simple squamous epithelium cells are flat in shape and arranged in a single layer.
108.Simple squamous epithelium cells found in the walls of capillaries, linings of the pericardium, and the linings of
the Alveoli of the lungs.

109.Simple cuboidal epithelium consists of single-layer cells that are as tall as they are wide.
110.The important functions of the simple cuboidal epithelium are secretion and absorption.
111.This epithelial type is found in the small collecting ducts of the kidneys, pancreas, and salivary glands.
112.Simple columnar epithelium is a single row of tall,
closely packed cells, aligned in a row.
113. The simple columnar epithelium is found in areas with high secretory function(such as the wall of the stomach), or
absorptive areas(as in small intestine)
114.Pseudostratified epithelium can also possess fine hair-like extensions of their apical(luminal)membrane called
cilia.
115. Ciliated epithelium is found in the airways(nose, bronchi), but is also found in the uterus and fallopian tubes of
females, where the cilia propel the ovum to the uterus.
116. Stratified epithelium differs from simple epithelium by being multilayered.
117. Stratified epithelium found where body linings have to withstand mechanical or chemical insults.
118. Stratified epithelia can be columnar, cuboidal, or squamous type.
119. In keratinized epithelia, the most apical layers(exterior)of cells are dead and lose their nucleus and cytoplasm.
120.Keratin makes the epithelium waterproof, and it is abundant in mammalian skin.
121.The lining of the esophagus is an example of a non-keratinized or moist stratified epithelium.
122.Transitional epithelia are found in tissues that stretch
123.Anatomy Is the study of body structure.
124.Physiology Deals with body function.
125.Physiology studies the normal mechanical, physical, and biochemical processes of animals and plants.
126.Cell is a basic structural and functional with of body.
127.Cell 2sof two major parts. Cytoplasm and Nucleus
128.ïysercof cell are Nerve cell, Muscle cell, Connective cell, and Immune cell
129.Composition of cell: Water 65-80%, Proteins, Electrolytes, Lipids and

Carbohydrates

130.Cell membrane/plasma membrane is the outer covering of the cell. It is very thin in nature about 8-10 nanometer.

131. The structure of the cell is lipid by layer in nature in which carbohydrates are sandwiches and proteins are also emended
in it.

132.Cell provides the passage of the water-soluble substances.

133.Cell act as transported by attaching to the cell membrane proteins.

134.Cell Permit the passage of ions and molecules outside the cell.

135.Cell protects the cell organelles.

136.Some carbohydrates in the plasma membrane are helpful for the binding of hormones(insulin).

137.Cytoplasm is part that surrounds/ covers the cell nucleus. It lies near to the cell membrane.

138.Ectoplasm is near to the cell membrane

139.Endoplasm is near to the nucleus Composition

140.Cytosol is a clear fluid where all organelles are present.

141.The endoplasmic reticulum is a series of tubular portions in the cytoplasm.

142.Types of endoplasmic reticulum are Rough surface endoplasmic reticulum(Granular)and Smooth surface
endoplasmic reticulum(A granular).

143. Ribosomes are attached to the outer surface of the endoplasmic reticulum.

4 Proteins are synthesized by the ribosome and then transferred to the endoplasmic lumen.

Y4mooth surfaced endoplasmic reticulum

146.Lipid biosynthesis and intracellular transportation.

147.In liver there is a large quantity of smooth endoplasmic reticulum is present.

148.Rough surface endoplasmic reticulum plays a major role in glycogen metabolism.

149.Rough surface endoplasmic reticulum also helps in detoxification of various toxins and alcohol.

150.Types of the ribosome are depending upon their function.

151.Endoplasm reticulum ribosome Protein Synthesis

152.Free-floating ribosome Produce cytoplasmic proteins

153.Transcription: it is a formation of messenger RNA from DNA

154.Translation: Formation of proteins. It is occurred due to messenger RNA and

Translational RNA.
155.Golgi apparatus is also called a Golgi body or Golgi complex
156.Golgi apparatus is a membranous organelle.
157.Golgi apparatus is responsible for packaging and lysosomes formation.
158.Golgi apparatus form lysosomes.
159.Golgi apparatus form secreting cells.
160.Golgi apparatus modifies N-oligosaccharides.

161. Golgi apparatus is the site for carbohydrates and proteins.
162.Golgi apparatus is self-replicating the organelle,thread-like membrane that synthesizes high-energy phosphate.
Therefore it is called power house of cell.
163.Golgi apparatus has different size and shape.It is motile,localized inter cellular site for maximum energy.It is
wide 0.5-1um and length up to 10um.
164.Golgi apparatus are elongate in shape,like a
s cigar shape.These are single and branched.
165.Golgi apparatus composed of
Proteins and lipids in lower quantity and small quantity of DNA or RNA are
present in it.
166.Golgi apparatus composed of two lipped bilayer protein membrane consisted of two parts,Outer membrane
and Inner membrane
167.A large amount of ATP is formed in mitochondria.
168.Nucleus is a control center of cell.It is responsi
ble for all physiological biochemical and reproductive functions
of cells.It is mostly present in eukaryotic cells.
169.Nucleus of each cell is usually in spherical
size and shape is 4-10mm in diameter.
170.Nucleus is made by nucleus membrane,nucleus plasma.Chromosomes and nucleolus.
171.Nucleus consists of water=80% and dry weight=20%in which DNA 18%and RNA 2%are present.
172.Nucleus is a control center of cell.
173.Nucleus controls the proteins synthesis by messenger RNA.

174.Nucleus helps in hereditary material transformation.
175.Nucleus controls the cell division.
176.Nucleus controls the activity of cytoplasm.
177.The skeletal system in an adult bo
dy is made up of 206 individual bones.
178.Bones are arranged into two major divisions,A
XIAL SKELETON and Appendicular skeleton.
179.The axial skeleton runs along the body's midline axis and is made up of 80 bones
180.Appendicular skeleton is made up of 126 bones
181.Skull is composed of 22 bones that are fused together except for the mandible.
182.Fused bones are separate in children
183.The bones of the superior portion of the skull are known as the cranium and protect the brain from damage.
184.The bones of the inferior and anterior portion of the skull are known as facial bones and support the eyes,nose,
and mouth.
185.The hyoid is a small,U-shaped bone found just inferior to the mandible.
186.The hyoid is the only bone in the body that does not form a joint with any other bone,it is a floating bone.
187.The hyoid's function is to help hold the trachea open and to form a bony connection for the tongue
188.The malleus,incus,and stapes known collectively as the auditory ossicles are the smallest bone in the body
189.The sternum,or breastbone,is a thin,knife shaped bone located along the midline of the anterior side of the
thoracic region of the skeleton.
190.The sternum connects to the ribs by thin bands of cartilage called the costal cartilage.
191.There are 12 pairs of ribs that together with the sternum form the ribcage of the thoracic region.
192.The first seven ribs are known as true ribs"
193.Ribs 8,9,and 10 all connect to the sternum through cartilage
194.Ribs 11 and 12 are also false ribs
195.Thirty three vertebrae form the vertebral column of the human body.
196.Cervical(neck)-7 vertebrae

197.Thoracic(chest)-12 vertebrae
198.Lumbar(lower back)-5 vertebrae
199.Sacrum-5 vertebra
200.Coccyx(tailbone)-4 vertebras
201.The pectoral girdle connects the upper limb(arm)bones to the axial skeleton
202.The humerus is the bone of the upper arm.
203.Humerus forms the ball and socket joint of the shoulder
204.The radius and ulna are the two bones of the forearm.
205.The uina is on the medial side of the forearm and forms a hinge joint with the humerus at the elbow.The radius
allows the forearm and hand to turn over at the wrist joint.
206.The lower arm bones form the wrist joint with the carpals,
207.Carpals are a group of eight small bones that give added flexibility to the wrist.
208.Each finger has three bones known as phalanges,except for the thumb,which only has two phalanges.
209.Pelvic Girdle and Lower Limb Formed by the left and right hip bones,
210.Pelvic girdle connects the lower limb(leg)bones to the axial skeleton.
211.The femur is the largest bone in the body
212.The femur forms the ball and socket hip joint with the hip bone
213.The patella forms in early childhood to support the knee for walking and crawling.
214.The tibia and fibula are the bones of the lower leg.
215.The tibia is much larger than the fibula and bears almost all of the body's weight.
216.The fibula is mainly a muscle attachment point and is used to help maintain balance.
217.The tibia and fibula form the ankle joint with the talus.
218.The brain is composed of the cerebrum,cerebellum,and brainstem.
219.The cerebrum is the largest part of the brain
220.Cerebrum is composed of right and left hemispheres.
221.The cerebellum is located under the cerebrum.
222.Cerebellum function is to coordinate muscle movements,maintain posture,and balance.
223.The brainstem includes the midbrain,pons,and medulla.
224.Ten of the twelve cranial nerves originate in the brainstem.
225.Hypothalamus is located in the floor of the third ventricle
226.Pituitary gland lies in a small pocket of bone at the skull base called the sella

turcica.
227.The pituitary gland is connected to the hypothalamus of the brain by the pituitary stalk.
228.Pineal gland is located behind the third ventricle.
229.Thalamus serves as a relay station for almost all information that comes and goes to the cortex.
230.The skeleton makes up about 30-40% of an adult's body mass.
231.Roughly half of the bone matrix's mass is water
232.Living bone cells are found on the edges of bones and in small cavities inside of the bone matrix.
233.All of the bones of the body can be broken down into five types:long,short,flat,irregular,and sesamoid.
234.Long.Long bones are longer than they are wide and are the major bones of the limbs.
235.Long bones grow more than the other classes of bone
236.A hollow medullary cavity is found in the center of long bones and serves as a storage area for bone marrow.
237.Short.Short bones are about as long as they are wide and are often cubed or round in shape.
238.Flat bones do not have a medullary cavity like the long bones.
239.The frontal,parietal,and occipital bones of the cranium along with the ribs and hip bones are all examples of
flat bones.
240.Irregular bones have a shape that does not fit the pattern of the long,short,or flat bones.
241.The vertebrae,sacrum,and coccyx of the spine as well as the sphenoid,ethmoid,and zygomatic bones of the
skull are all irregular bones.
242.Each end bone is called an epiphysis while the middle bone is called a diaphysis
243.The articular cartilage acts as a shock absorber and gliding surface between the bones to facilitate movement
at the joint.
244.Joints are simply the connective tissue
245.Joints are classification according to the nature of their connective tissue.
246.The connective tissue of solid joint is partially cartilaginous and partially fibrous

247.Blood is a type of connective tissue.It is composed of blood cells and an aqueous fluid known as plasma.
248.Blood consist of cellular part and non cellular
249.RBCs(red blood cells)are also called erythrocytes.
250.WBCs(white blood cells)are also called leukocytes.
251.Plasma consists of fluid part(water 91%)and a solid part 9%.
252.Organic substances or blood are Proteins 7%,Albumin 4.5-5.5%,Fibrinogen 0.2%,Globulin
1.3-2%,
Prothroin0.1%
253.Non pi0z,rogenous substances of blood are Urea,Uric acid,Creatinine,Arsine acid,Ammonia.
254.Non nurogenous substance of blood' are
Glucose,Cholesterol,Glucose,Phospholipids and Triglycerides.
255.Enzymes present in blood are Amylase,Carbonic Anhydrase,Lipase,Phosphatase.
256.Blood has bilirubin Pigments
257.Inorganic substances in blood are
Sodium,potassium,Chloride,Chorine,Calcium,Bicarbonate,lodine,
Magnesium and phosphorus.
258.All cells that comprise the blood are produced in the bone marrow.
259.The blood is a renewable tissue of the human body
260.Blood have a limited life span.
261.RBCs are red oxygen carrying.Hemoglobin containing non nucleated cells present in blood.
262.RBCs Count:Males:.5.4 Million/cumm,Females:4.7 Million/cumm,Infants:6.0 million/cumm
263.Mature RBCs do not contain mitochondria and nucleus.They contained HD.
264.RBCs contain Water=65%,Solid&semi solids=35%
265.Average life span of RBCs is only 120 days.
266.In neonate(body)RBCs have shopper life span(70 to 90)days
267.For energy of RBCs depend upon plasma glucose.
268.1st:trimester(first three months of pregnancy)RBCs are produced from foetal life.RBCs are produced in the
yolk sac.
269.2nd:trimester(three to six months of pregnancy)RBCs are produced mostly in liver

in spleen and lymphnodes.
270.3rd trimester(six to nine months of pregnancy)During the last trimester of pregnancy and after birth they are
produced from bone n
larrow.
271.Up to the age of 5 years all bones produces RBCs.
272.After the age of 20 bone marrow of long bones does not produce RBCs
273.After the age of 25 years RBCs are mostly produced in the marrow of membranous bones.
274.Vitamin B12 is essential vitamin.for DNA synthesis.
275.Vitamin C and folic acid both are important for erythropoiesis.
276.Protein(Amino acid are necessary for the synthesis of globin in the synthesis of 11b).
277.Intrinsic factor,Fe and some hormones
are also essential for erythropoiesis.
278.In response to decreased blood oxygen,kidney r
elease erythropoietin.This stimulates RBCs production in the
red bone marrow.
279.The count of RBCs is lowest during sleep and
early morning hours and highest during evening.
280.RBCs count increases during an
increase in external temperature.
281.RBCs count increases during an increase
in external temperature.
282.High Poxia Increases the RBCs count.
283.Repeated X-Ray decrease RBCs pr
oduction by depressing bone marrow actively.Function of RBCs
284.There are two principal types of megaloblastic,
one is caused by lack of vit B12 and other is cause by
deficiency of folic acid.
285.In Aplastic Anemia type of anemia,the RBVs WBCs and platelets count are decreased due to bone marrow
aplasia or the lack of function of bone marrow.
286.Vitamin B12 is not absorbed in pernicious anemia.
287.Patient suffering from pernicious anemia are less sick than those suffering with

folate deficiency anemia.
288.Folic acid deficiency anemia is the type of megaloblastic anemia due to deficiency of folic acid.
289.The deficiency of folic acid causes the slow DNA continues to form that accounts for megaloblastic anemia.
290.Iron deficiency anemia is the type of anemia it occurs when there is an inadequate amount of iron,is present for
hemoglobin synthesis.
291.Hemolytic anemia means break down of Red Blood Cells.
292.In Hemolytic anemia type of anemia there is early rupturing of the red blood cells,And release of hemoglobin.
293.In Sickle Cell Anemia type of anemia there is an abnormal form of HB called HB-s which is caused by an
inherited genetic defect.
294.Sickle cell anemia is created with folic acid and the infection of treated with antibiotics.
295.Blood transfusion is advised when HB is falls to 5mg%in Sickle Cell Anemia
296.In the presence of anticoagulant the process of setting down of RBCs from the specimen of blood is known as
sedimentation.
297.The rate at which this settling of RBCs occurs is known as the erythrocyte sedimentation rate.
298.Size and shape or RBC affect ESR
299.Specific gravity of corpuscles affect ESR
300.Concentration of cholesterol affect ESR
301.Temperature:if the temperature is above 20C E.S.R willbe increased.
302.Specific gravity:with high specific gravity RBCs sink more quickly.
303.Decreased viscosity increases the E.S.R.
304.Normal values of E.S.R in the first hour Western method Males=5-10mm,Females=10-15mm
305.Normaiues of E.S.R in the first hour Win robes method Males=0-10mm,Females=10-15mm
306.Factors increasing the E.S.R Increase 02,cholesterol,a-globulin,fibrinogen,temperature above 20 C.
307.White blood cells(leukocytes)are mobile unit of the body protective system.

308.WBC classified in to two major groups Granular leukocytes(Granulocytes)and Agranular leukocytes
(Agranulocytes)
309.Granular leukocytes are developing from red bone marrow
310.The three types of granular leukocytes are Polymorphonuclear neutrophils,Polymorphonuclear eosinophils,
Polymorphonuclear basophils.
311.Agranular leukocytes are the second principle group of leukocytes.They develop from the lymphoid tissue
cytoplasmic granules are not seen:
312.Total number of WBCs:Average=7000/mm3,Range=4000-11000/mm3
313.Normal values of each type of WBCs are Polmorphonuclear neutrophils 5400/mm3,Polmorphonuclear
eosinophils 275/mm3,Polmorphonuclear basophils 35/mm3,Lymphocytes 2750/mm3,Monocytes 450/mm3.
314.Functions of WBCs:
315.Phagocytosis:This is a process by which neutrophils and macrophages engulf and destroy the bacteria viruses
and foreign particles
316.phagocytosis occurs by both neutrophils and monocytes when bacteria invade the body.
317.Lymphocytes from and fraction of serum globulin immune bodies are associated with globulin.
318.lymphocytes play an important role in the defensive mechanisms of the body.
319.Lymphocytes may be converted in to fibroblasts at the site of inflammation,helping in the process of repair.
320.basophils secrete heparin.This prevents intravascular clotting of blood.
321.Platelets(Thrombocytes)are small,nonncleated cells present in blood.
322.Platelets are small,irregular,round,or oval dise like cells.
323.Size of Platelets is 2-4 microns in diameter.
324.Their normal cuunt of Platelets in blood is between 150,000 to 300,000/cu mm.
325.Life span of Platelets 4-9 days
326.Types of Platelets are Small (young)platelets(or active platelets),Large(old)platelets.
327.Platelets posscss proteins,lipids(phospholipids.Arachidonic acid).

328.The principle functions of platelets in hemostasis.

329.Platelets are necessary for the maintenance of vascular integrity.
330.Platelets repair small vascular injuries by adhering to the basement membrane.
331.Platelets provide glycoprotein, their adhesion to collagen.
332.Platelets show slight phagocyte activity.
333.Coaqulation or clotting of blood is the process of conversion to soluble plasma fibrinogen into insoluble fibrin
substance to form a clot.
334.The formation of prothrombin activator is initiated by the interplay of two mechanisms, the extrinsic and intrinsic
pathways of blood clotting.
335. At least 30 commonly occurring antigens and hundreds of other rare antigens are found in human blood.
336.Two particular groups of antigens are more likely
to cause blood transfusion reactions.
337.Antigens are present on the surface membranes of RBCs
338.Antibodies are humeral substances produced in response to antigens.
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339.Agglutinins are antibodies(immunoglobins) that cause agglutination upon combing with corresponding
agglutinogens.
340.Rh factors are antigens present on the surface of RBCs which cause agglutination
341.Heart is a conical, hollow, muscular organ situated in the middle mediastinum.
342.Arteries are a series of blood vessels that carry oxygenated blood away from the heart(except pulmonary
and umbilical arteries).
343. The walls of arteries are constructed of three coats of tunica.
344. Arterioles are the smaller branches of arteries that deliver blood to capillaries.
345. Arterioles play a key role in regulating blood flow from arteries into capillaries.
346. A change in the diameter of arterioles can also significantly affect blood pressure.
347. Capillaries are diffuse networks of blood vessels that connect the arterioles and.venules.
348.Capillaries are found in almost every cell in the body.
349. The distribution of capillaries in the body varies with the activity of the tissues.

350. Venules are blood vessels that connect capillaries with veins.
351. Veins are a series of blood vessels that carry blood towards. the heart(except pulmonary and umbilical veins).
352. Veins are composed of essentially the same three coats as arteries, but there are variations in their relative
thickness.
353.When a number of cells function as a single unit the.whole functional unit is called a functional syncytium.
354. The heart is composed of two different syncytia, the atrial syncytium, and a ventricular syncytium
355. Automaticity is the ability of cardiac impulses from the Sinoatrial node(S.A.node) to all the cardiac muscles.
356.The refractory period is the time period during which an already excited cradle muscle cannot be re-excited by a
normal stimulus.
357.The refractory period is of two types absolute refractory period and Relative refractory period.
358.The cardiac cycle is the period from the beginning of one heartbeat to the beginning of the next heartbeat.
359. The cardiac cycle consists of a period of relaxation called diastole.
360. All 8 stages of the cardiac-cycle occur in only 0.8 seconds.
361. Ventricular systolic takes 0.30 seconds to complete
362. Ventricular diastole takes 0.49 seconds to complete
363. Heart sounds are heard with the help of a stethoscope(discovered by Lenic).
364. Two Heart sounds are normally hard during each cycle.
365. In some cases, one may hear a 3rd or 4th heart sound.
366. Heart sounds are made by the closure of the heart valves
367. The first sound one hears is described as LUB.
368. First heart sound is produced just after the QRS complex of ECG duration of 0.15 secretaries.
369.2nd heart sound is produced by the vibration associated with the closure of the semilunar valves(aortic and
pulmonary)just after the end of ventricular systole.